

MISSOURI BOTANICAL GARDEN
(Shaw's Garden)
2345 Tower Grove Avenue
St. Louis
Missouri

HABS No. MO-1135

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MO,
96-SALU,
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Historic American Buildings Survey
National Park Service
Department of the Interior
Washington, D.C. 20240

HISTORIC AMERICAN BUILDINGS SURVEY

HABS No. MO-1135

MISSOURI BOTANICAL GARDEN
SHAW'S GARDEN

Location: Bounded by Shaw, Magnolia, Tower Grove, and Alfred Avenues;
Garden Headquarters at 2345 Tower Grove Avenue, St. Louis,
Missouri.

USGS Webster Groves Quadrangle, Universal Transverse
Mercator Coordinates: 15.738900.4277670; 15.738780.
4276730; 15.738360.4276780; 15.738380.4277100; and
15.738620.4277630

Present Owner: Board of Trustees, Missouri Botanical Garden.

Present Use: Botanical garden and research facility.

Significance: The site of important botanical research since its inception,
the Garden was one of the first institutions in the country
for horticultural display and education. Just ten years
after it was founded by Henry Shaw in 1858, it was considered
to rival the finest such European institutions (according to
Asa Gray as quoted in "Garden History," MBG Bulletin, Aug.
1968, p. 244).

PART I. HISTORICAL INFORMATION

A. Physical History:

1. Date of inception: The plan was determined, drains constructed,
and the wall surrounding the Garden commenced in 1858 (MGB
Bulletin, Dec. 1918, p. 128).
2. Nineteenth and early twentieth century designers:
 - a. Landscape architects: There is no evidence that a landscape
specialist was involved with the original plan. Founder Henry
Shaw himself had drawn preliminary plans and supervised the
actual laying out of the Garden, probably with the aid of
architects Charles H. Peck (Hyde, p. 1714), and George Barnett
(Barnett, p. 13). For biographical information on Shaw, see
Part I, item B.
1. Charles H. Peck (1817-1899). Peck, a master builder,
architect, "manufacturer and a promoter of many of the
most important industrial and financial enterprises of
St. Louis," was born September 21, 1817, in New York City,
and died in St. Louis July 3, 1899.

He built most of the government buildings in the old
arsenal, now called Lyon Park, and also built the maga-
zines in Jefferson Barracks. The city and country residences

of the late Henry Shaw were built under his supervision and he assisted also in laying out the first outlines of Shaw's Garden... In due course of time he accumulated surplus capital, which enabled him to engage in many other enterprises... and later all his time was given up to manufacturing, mining, banking, railroads, and other interests..." (William Hyde and Howard L. Conrad, eds. Encyclopedia of the History of St. Louis, vol. III pp. 1713-1714).

2. George Ingram Barnett (d. -1898). Trained in London under Sir Thomas Hine, George Ingram Barnett became one of the first established architects in St. Louis in 1839 (Hyde, p. 98), and there began a family architectural dynasty. The favorite architect and close friend of Henry Shaw (Shoemaker, p. 73), he also designed the church of St. Vincent de Paul and the Equitable Building (Hyde, p. 98). He soon became one of the most prolific and well-known mid-nineteenth century architects in St. Louis (Hyde, p. 98). "One of the charter members of the American Institute of Architects..., he was known in the West as the Dean of Architecture and from his offices graduated some of the leading architects of the Middle West, among them being...Henry Isaacs,...Thomas J. Furlong,...Isaac S. Taylor,...George D. Barnett, Thomas I. Haynes, and Thomas P. Barnett" (T. P. Barnett, p. 13). He died on December 29, 1898, leaving offspring responsible for much of the work at the 1904 World's Fair and for the Cathedral of St. Louis (Barnett, Haynes, and Barnett, p. 10).
3. Frederick Law Olmsted, Sr. (1822-1903), John Charles Olmsted (1853-1920), and Charles N. Eliot (d. -1908), designers of the North American Tract of 1905.

"Frederick Law Olmsted (1822-1903), this nation's most comprehensive environmental planner and designer, contributed to the development of cities and regions, of a national park system, and of the United States Forest Service. It was always with a commitment to social democracy that he completed his prototypical designs for such planned environments as urban parks, parkways, suburban communities, and campuses. His work, or examples of his influence, are still evident in every region of this country and in Canada.

Born in the rural environs of Hartford, Connecticut, on April 26, 1822, Olmsted was a member of an old New England family that had ties to the land and the sea"

(Fein, p. 3). He attended lectures in agriculture at Yale in the 1840s. In 1849 he began a nursery business, and in the 1850s he became acquainted with the famous landscape architect and arbiter of taste, A. J. Downing and traveled in Europe (Olmsted, pp. 4-6).

~~"There may be detected in Olmsted's professional career~~ (1857-96) two distinct periods of creativity. The first began with the prize-winning design for Central Park in 1858--Greensward, undertaken with the English-born and trained architect, Calvert Vaux (1824-95)--and continued through a long, politically troubled career as a professional landscape architect and Superintendent of New York City parks. This public affiliation ended painfully in 1878, forcing Olmsted, in 1883, to leave New York City, the nation's most important urban center, for Brookline, Massachusetts, a suburb of Boston, where he became essentially a private practitioner. The second period may be said to have begun in 1878 and to have ended in 1893 with his landscape design for the Chicago World's Fair which took place only three years before his incapacitating terminal illness" (Fein, pp. 5-6). By then he had created estates all over the country, collaborating with such architects as Richard Morris Hunt and Henry Hobson Richardson. He designed parks and cemeteries throughout New England and in Washington, D. C.; designed the campus of Stanford University in California; and contributed to sanitary and metropolitan growth plans in several of the major urban areas on the east coast (Fein, pp. 5-6). The preliminary plans for the Garden's North American Tract were probably the last to come from his office before his retirement from the firm in 1896.

John Charles Olmsted was F. L. Olmsted, Sr.'s stepson and the son of his younger brother John Hull Olmsted. After graduation from The Sheffield Scientific School at Yale, he became an apprentice to his stepfather in June of 1874. He became a full partner in the landscape firm in 1884 (Olmsted, pp. 19-27).

Charles N. Eliot was a young disciple of Olmsted, Sr., who became a full partner in the firm in 1893. He collaborated with the elder Olmsted to create the regional plan for the metropolitan Boston area from 1878-1895 (Fein, p. 7).

4. John Noyes (1886-195?). Between 1915 and 1950, Noyes created the new Italian and Economic Gardens and The

Knolls, added features to the main Garden, and designed the Gray's Summit Extension. He was a graduate of the Massachusetts State Agriculture College and had been an associate of landscape architects Jens Jensen of Chicago and Warren Manning, who had been with the Olmsted firm, of Boston (Shaw Mss. Trustees' Minutes, 1/13/15). He apparently maintained a private practice, located in The Railway Exchange Building in downtown St. Louis, for years. Upon retiring, he moved to Cheshire, Connecticut in 1954 ("Notes of Interest," Landscape Architect, XLIV, #2, p. 101).

b. Architects:

1. George I. Barnett (d. -1898). See above.
2. Isaac S. Taylor (1850-1917). Isaac Taylor began his career in the office of George I. Barnett in 1869 and became his partner in 1874 ("Taylor," Who Was Who, p. 1220). Together they designed the prestigious Southern Hotel; independently he designed some of St. Louis' most prominent public architecture, including the Jefferson Memorial and the public library. He was director of works for the Louisiana Purchase Exposition and worked extensively in Texas and Illinois as well (Taylor, "The Book of St. Louisans, pp. 588-589).
3. Eugene L. Greenleaf (1815-1881). Greenleaf, who designed The Casino (demolished) at Tower Grove and Magnolia Avenues, was born in Ohio and had settled in St. Louis by 1840 (St. Louis Marriages, 1804-1876, vol. 1, book 02, p. 268). From the late 1840s until 1879, he is listed in city directories as a carpenter or architect and builder. From 1869 to 1879, his offices were on Olive Street, near those of George Barnett, and his partners, other architects involved in the supervision and design of the architectural, and possibly of some landscape, features of Tower Grove Park and The Missouri Botanical Garden. Greenleaf was sharing these offices at that time with a W. E. Greenleaf, presumably a brother, who is listed as a draftsman for Eugene, then as a builder and architect himself (City Directories, 1869-1876). Little else is known of Eugene aside from the fact that he supported a household of eleven in 1860, which included his seven children and two British servants, and held realty valued at \$30,000.00 and personalty worth \$20,000.00 by 1870 (State Census Reports 8/9/1860, 4th ward, p. 378; 6/1/1870, 2nd ward, p. 83). After his death by paralysis in Jacksonville, Illinois, Eugene came to share a

grave in St. Louis' historic Bellefontaine Cemetery with Stephen Greenleaf, presumably another brother, with whom he had shared a practice as a "Builder" in the early 1850s (City Directory).

4. John Lawrence Mauran (1866-1933), Ernest John Russell (1870-1956), and Edward Gordon Garden (1871-1924). The architectural partnership of John Lawrence Mauran, Ernest John Russell, and Edward Gordon Garden was established 1900. The leading partner John L. Mauran had studied architecture at the Massachusetts Institute of Technology and trained in the Boston, Chicago, and St. Louis offices of Shepley, Rutan & Coolidge; he was appointed by President Theodore Roosevelt to the Fine Arts Commission and served as President of the AIA from 1916-1918. Garden was educated in Toronto and presumably trained with some St. Louis firm in the late 1890s (Withey, p. 229). Little is known of Russell's background.

One of the firm's first projects was the inheritance from Olmsted and Eliot of the planning and development commission for the Missouri Botanical Garden in 1902 (letter dated 1/23/1902 in MBG Lehmann Library Archives.) In 1903 they designed a quadrangle addition to the old Shaw Townhouse, Missouri Botanical Garden, with the intention of utilizing the entire complex for offices, library, and herbarium (Globe-Democrat, p. 1; Trustees Minutes, 11/11/03). In 1908-09 only the first step of this plan was completed.

The First Church of Christ Scientist, the Pilgrim Congregational Church, the Second Baptist (all in St. Louis), and the Summer House for E. A. Hitchcock, Dublin, N. H. are among their work.

Mr. Garden withdrew from the firm in 1909, moved his practice to San Francisco, and then to Cleveland. William de Forrest Crowell was admitted to the firm in 1911 and W. Oscar Mullgardt in 1929. J. L. Mauran died in 1933. In 1937 the firm was renamed Mauran, Russell, Crowell, and Mullgardt (See: Architecture and Design: Mauran, Russell, Crowell, and Mullgardt, Architectural Catalog Co., Inc. 1937, New York). The present successors of the firm in St. Louis are Henmi, Zobel & Fott, Architects (founded in 1974).

5. James P. Jamieson (1867-1941). James P. Jamieson, who designed the new front entrance to the Missouri Botanical

Garden in 1921, was one of St. Louis' most renowned and distinguished architects during the early decades of the twentieth century.

Born in Falkirk, Scotland, on November 26, 1867, he came to the U.S.A. to join his older brother Thomas Paterson Jamieson in a Philadelphia architectural and engineering office. Later, as a draftsman, he joined the distinguished Philadelphia firm of Cope and Stewardson, renowned for their Gothic collegiate architecture at Princeton, Bryn Mawr, Haverford, and the University of Pennsylvania. In 1892 he won the architectural competition of the University of Pennsylvania Philatelic Society and then spent the year 1893-1894 abroad in Europe.

In 1900 Jamieson came to St. Louis representing Cope and Stewardson. Between the years 1900-1911 inclusive he designed all the buildings on the campus of Washington University, including the impressive Graham Chapel. By 1912 he had opened his own office in St. Louis, and in 1918 he entered into partnership with George Spearl. For the next twenty-five years this team designed academic buildings for Washington University and Medical School, the University of Arkansas, Stephens College, Berea College, Pomona College, the Shell Building on 1221 Locust Street, and residences and churches in St. Louis.

James P. Jamieson retired from practice because of ill health. In 1939, after his death his firm continued under the name Jamieson, Spearl, Hammond & Crolock, Architects. The present inheritors of the firm (since 1970) are Hammond, Charles, Burns and Le Pere, Architects (Shoemaker, ed. Missouri Historical Review, XXXVI, pp. 386-387).

c. Sculptors:

1. Howard Sigismund Kretschmar (1845-1933). Born in St. Louis Jan. 28, 1845, to a German immigrant family, Howard Kretschmar exhibited a talent for sculpture at an early age. In 1874 he went to Europe to study sculpture spending one year in Munich at the Royal Art Academy and another three years in Italy--in Florence, Rome and Milan. In 1876 while in Rome he carved a bust of Henry Shaw in carrara marble (in the Mercantile Library in St. Louis).

When he returned to St. Louis, he opened a studio on 1724 Washington Avenue where he completed the following

commissions for Henry Shaw:

- 1) Portrait bust of Linnaeus for the Linnaean House - \$400.00 (contract, bills 1881-1882, 6/3/1881, Shaw Papers, MBG Archives)
- 2) Marble busts of Mozart and Rossini at the Band Stand Pavilion (Tower Grove Park), \$110.00 (receipt, bills 1881-1882, 7/1/1882, Shaw Papers, MBG Archives)
- 3) We can safely surmise that Kretschmar also carved the busts of Nuttall and Asa Gray to complete the trio on the Linnaean House.

Correspondence between Henry Shaw and Kretschmar concerning some of the details of the above commissions are preserved in the "Shaw Papers" MBG Lehmann Library Archives.

Other works of Kretschmar in St. Louis include the equestrian statue of General Phillip Sheridan, the Logan Medallion of General Ulysses S. Grant and Sheridan, the busts of Dr. John O'Fallon Delany, Rev. Pierre J. De Smet, and Methodist Bishop Enoch Mather Marvin, and the statutory of the "Union of the Waters," Bissell Point Waterworks Building.

Howard Kretschmar coupled his artistic endeavors with a medical school education in osteopathy at Kirksville. By the turn of the century he had become a certified M. D. practicing medicine in Cook County, Illinois (St. Louis Post-Dispatch, March 4, 1964).

2. Ross C. Adams (dates unknown) and Carlo Nicoli (c. 1850-19?). There is documentation that both Adams and Nicoli were commissioned by Shaw to create works of art for Tower Grove Park (see HABS No. MO-1196), and it seems likely that Nicoli collaborated with the works in the Garden which are attributed to Adams.

Little is known of Adams aside from the fact that he was in correspondence with Henry Shaw from 1883 to 1886. Two statues for which Adams received payment were delivered to the Garden in September, 1886 (MBG Bulletin, Sept. 1918, p. 88). The statue of Juno, which cost \$775.00 was placed in the Italian Garden and that of Victory, which cost \$1,050.00, in the white stone original mausoleum near Shaw's actual tomb, within the boundaries of the

Missouri Botanical Garden (Shaw's papers for April-May 1883 to April 14, 1885, MBG Lehmann Library Archives). Both works were copies of statues in the National Museum of Naples (MBG Bulletin, Sept. 1918, p. 88).

Payment for busts of Gounod and Verdi at the Bandstand in Tower Grove Park was also made to Adams. However, the bust of Gounod bears the inscription "C. Nicoli & Adams." It is possible that Nicoli collaborated with Adams on the statues for the Garden as well.

Carlo Nicoli, or Nicoli Y. Manfredi was a better-known sculptor working in Europe. Presumably born about 1850 in Carrara, Italy he was active after 1876. He is said to have belonged to the School of Giovanni Dupré and to have worked in Madrid. His works appear in museums in Madrid, in the Plaza Mayor, and in the Bristol Museum in Britain (Benezit, p. 356 and Thieme, p. 457).

3. Ferdinand Von Miller (1842-1929). Ferdinand Von Miller was the owner and principal sculptor of the Royal Bronze Foundry, Munich, Germany. He was first introduced to Henry Shaw in 1871 while making a tour of the United States after supervising the erection of a fountain in Cincinnati, Ohio. For eleven years (1875-1886) the two corresponded regularly; twenty-three letters from Von Miller to Henry Shaw are in the Lehmann Library Archives; all concern details and specifications for the following statuary Von Miller made for Henry Shaw:

- 1) Statue of Shakespeare (1878) - Tower Grove Park
- 2) Statue of Alexander Von Humbolt (1878) - Tower Grove Park
- 3) Marble busts of Wagner and Beethoven (1884) - Tower Grove Park
- 4) Marble sepulcher image of Henry Shaw for his mausoleum (1886) - Missouri Botanical Garden
- 5) Statue of Columbus (1886) - Tower Grove Park

Each of the park statues were cast in bronze and cost approximately \$5,000.00 apiece with additional cost for reliefs which adorned the bases (TGP Comptroller Report 1882, p. 196 8/7/86); the busts were \$725.00 each; the exact cost of the marble figure for Henry Shaw's sarcophagus is unknown. Ferdinand Von Miller's statues in Tower Grove Park are among the best works of art he contributed to the United States. (Henry Shaw's contributions to Art in St. Louis: Missouri Botanical Garden Bulletin, Sept. 1918., pp. 81-90).

3. Original and subsequent owners: Description of property: The Missouri Botanical Garden, present city block 4104, is bounded on the north by Shaw Avenue, the south by Magnolia Avenue, the east by Tower Grove Avenue, and west by Alfred Avenue. In the center of the tract is the treed area known as Tower Grove. Title to the grove which belonged to Thomas Jefferson Payne, was procured by Shaw in a Sheriff's sale for \$95 on August 27, 1842 (Title in Shaw Mss. 'Real Estate Barriere des Noyers'). The seventy-five acre tract which constituted the Garden passed into the hands of the Board of Trustees of the Garden as designated in Shaw's will upon his death on August 25, 1889 ("Some Facts about the Garden," n.p.).
4. Original Plans, Construction, etc.: Shaw's biographer claims that the idea for the Missouri Botanical Garden was fostered during Shaw's last trip to Europe in 1850:

According to his own statement, it was while walking through Chatsworth...that the fruitful idea first dawned upon him. He said to himself: 'Why must I not have a garden, too? I have enough land and money for something of the same sort in a smaller way.' (Dimmock, p. 9)

Two years later he announced to local real estate agents that he "intended to have a Botanical Garden, with proper accessories, free to citizens and strangers to visit." (Elliot, p. 279)

By 1855 the grounds had been laid. During the next two years, Dr. George Engelmann, a local medical botanist who gained national fame as a meteorologist, acted as Shaw's lieutenant on a European search for 'proper accessories' for the Garden. This included obtaining the advice of Sir William Hooker of the Royal Botanical Gardens at Kew, and that of Asa Gray of Harvard; purchasing the Theodor Bernhardt herbarium in Erfurth, Germany; and forwarding seeds and specimens to Shaw (MBG Bulletin, Dec. 1918, pp. 128-129).

By 1856 the Garden had been trenched and two sides of stone walls completed; the west entrance and the plant houses were expected to be completed the next year, the Museum within two years (MBG Bulletin, Dec. 1918, p. 130). According to George H. Pring, who joined the Garden staff around the turn of the century, the original greenhouse range consisted of a quadrangle--the east, domed Fern House, then the East Indian House, Orchid House, Small Bromeliade House, Acacia House, domed Yucca House, and Cactus House--with the later main conservatory centered behind the parterre with its statue of Juno on axis with the east entrance gate (Pring Tape IB). That gate was designed by George I. Barnett and built in 1858 (MBG Bulletin, Dec. 1918, p. 131). The Museum, designed by Barnett and Weber, was still under con-

struction when the Garden opened to the public in 1859.

The general plan and planting of the Garden were done by Shaw himself: "All this I am doing according to my own ideas gathered from the horticultural works of Loudon, McIntosh, etc.--no one here can give me the least information" (MBG Bulletin, Dec. 1918, p. 130). Shaw's plan described and lauded by Thomas Meehan, arboriculturist and editor of Gardener's Monthly, in 1868, was described in detail by Shaw himself in his guide to the Garden of 1880. The sixty-some developed acres were divided into three sections:

First, the Garden proper, containing the plant houses for tropical and other plants requiring protection, the herbaraceous ground with plants scientifically arranged and named, and the cacti in the north end of the Garden next to the wall.

Second, the Fruticetum for shrubbery and experimental fruit gardens.

Third, the Arboretum (begun 1860), containing a collection of trees, comprising all that will grow in the open air in this climate and locality; a Pinetum for the Pine family, a Quercetum for oaks, and a Salicetum for willows (Reprinted in MBG Bulletin, Dec. 1918, p. 132).

5. Alterations and Additions: Barnett designed the central pavilion, now removed, in 1863 (Shaw Mss. Cashbook, 1856-66, p. 77) having also designed a limestone mausoleum, near Shaw's house 'Tower Grove' in the center of the Garden, which was built the previous year. In 1868, a Palm House was built in the north-central part of the Garden, and in 1881, yet another greenhouse, this one an orangery dedicated to Linnaeus and situated in the far north. A Lodge or Casino (later a restaurant) was constructed in 1873 by architect Eugene L. Greenleaf at the northwest corner of Magnolia and Tower Grove Avenues and was sometimes used to house students of Shaw's School of Botany after 1885 (Shaw Mss. 'Bills 1873'; Trustees' Minutes 4/9/1890).

Further extensive change did not occur until the 1890s. First came the re-erection of Shaw's Townhouse inside the Garden at 2315 Tower Grove Avenue. At this time the labyrinth in the Arboretum was removed (Shaw Mss. Trustees' Minutes 1891-1892). In 1895, the Cleveland Avenue Gatehouse at 2221 Tower Grove Avenue was built (Layton, p. 51); two years later the east addition to Tower Grove House was completed to accommodate the family of the second Director, William Trelease; a Victoria Regia pond replaced the entrance parterre at about this time ("James Gurney," p. 29).

It was in 1896 that the first landscape architects were hired to work on the Garden. Messrs. Frederick Law Olmsted, Sr., John Charles Olmsted, and Charles Eliot of Brookline, Massachusetts, submitted a master plan, recommending a synoptical garden and the removal of the Linnaean House, among other things. (See HABS photocopy of Olmsted plan). Little of their plan was implemented except in the southwest area known as the North American Tract (a 220-acre addition along Magnolia Avenue made in 1899) designed by Olmsted Brothers and executed in 1904-1905 (Shaw Mss. Trustees' Minutes, 12/14/1904 p. 5).

In 1902, Messrs. Mauran, Russell, and Garden were retained to develop a master plan for future architectural work in the Garden (Shaw Mss. Trustees' Minutes, 2/12/02, p. 4). In 1908-1909 the first phase of a plan, originally suggested by Olmsted, for constructing an addition to the South section of the Townhouse as a quadrangular herbarium-library-administration building complex was completed according to their design (City Building Permit, Block 4104, F 5355, 4/15/08. It was the only phase implemented. For further information on this structure, see the separate report on Missouri Botanical Garden, Administration Building (MO-1195 B).

With George Moore's assumption of the directorship in May of 1912 came the next major building campaign. The Palm House and smaller flanking houses, presently the Desert and Mediterranean Houses, begun under Trelease's term, were completed. Moore reported construction under the first five years of his term consisted of: Floral Display House and fifteen large concrete cold-frames (1914-1915); a new director's residence (accommodated by the removal of the Casino at Magnolia and Tower Grove Avenues, 1915); an engineer's house, brick storage shed, and concrete steam heating tunnel in the north-west; and removal and re-erection of all old greenhouses except the old brick Palm House behind the Linnaean Garden wall.

Moore also listed several landscape additions: the Italian Garden; the Perennial Garden bounding the Linnaean House, replete with heated pools; the Knolls; permanent shrubbery beds and magnolias around the water garden; new shrubbery around all green houses and along all walks; and more trees (Shaw Mss. Trustees; Minutes 12/31/17).

This surge in landscaping activity was due to the fact that John Noyes had been hired as an instructor at the Shaw School of Botany in 1913 (Shaw Mss. Trustees' Minutes 2/11/14, p. 71). Noyes was the first landscape architect to work on the Garden since the termination of the Olmsted contract nearly ten years before. Noyes was a graduate of the Massachusetts State Agriculture College and had been an associate of Jens Jensen of

Chicago and Warren Manning, formerly with Olmsted, of Boston. He did not submit a radically changed master plan of his own, but rather was responsible for the new gardens put in at this time; and the Olmsted Master Plan was not officially abandoned until 1960. By 1915, a policy had been formulated under which Noyes was responsible for the design of new gardens and greenhouses (Shaw Mss. Trustees' Minutes 1/13/15). The first of these was a rose garden south of Tower Grove and west of the Townhouse, where Shaw's stables had been. This was created in 1913-1914 and had a raised pergola in its center. It became an iris test garden when the rose garden was established near the main gate in 1916 (Pring Tape III B). The new garden became St. Louis' first successful rose garden, and utilized rare specimens donated by Dr. Sargent of Harvard's Arnold Arboretum (Shaw Mss. Trustees' Minutes 12/31/17). In between the first and second rose garden came the topographic feature known as the Knolls. This consisted of trees and landscaping to replace the pavilion and the surrounding maze-like hedges and walks which had been centered on the axis from Shaw's balcony at Tower Grove House to the Linnaean House's south door. The three-tiered southwest Economic Garden, the Italian Garden with Pergola to the northwest, and the Linnaean Garden with pools to the extreme north (Pring Tape III B) were also added.

A new decade and a new phase of Garden history began with the completion of the new main entry gate designed by Jamieson and Spearl in 1921, which incorporated the name and datestone from Barnett's original. During the preceeding year, the Garden had been increasingly plagued by the ill effects of a city location. The western portion of the Garden, which became known as "Shaw's Subdivision," was sold in 1923 in order that the Garden might buy a tract of land outside of the industrialized city area (Shaw Mss. Trustees' Minutes, 11/30/23). A tract at Gray's Summit, Missouri, 32 miles southwest of St. Louis, consisting of 12,000 acres on the north bank of the Meramec River was purchased in 1925 (Shaw Mss. Trustees' Minutes 9/30/25). The following year, 323 acres on the south side of the Meramec River were purchased to protect the property on the opposite shore (Shaw Mss. Trustees' Minutes, 11/30/26). That same year the landscaping for the main Gray's Summit Tract was designed by John Noyes. Also in 1923 the Garden further expanded its interests and holdings with the purchase of a tropical garden in the Panama Canal Zone.

The Gray's Summit extension was developed during the 1930s and 1940s. Eight orchid houses were built there in 1935-1936, as was a main gate-comfort station, designed by Noyes (MBG Bulletin, Jan. 1935, p. 12; Pring Tape III B). In 1939 a reservoir designed by Noyes (Pring Tape III B) was built under the supervision

of A. P. Beilmann, arboriculturist; the next year the east bridge was constructed (MBG Bulletin, Jan. 1942, p. 2). Next serpentine walls modeled after those at Jefferson's University of Virginia were built in 1945 (MBG Bulletin, Jan. 1946, p. 2), and in 1950, "Pot Hole Lake" was created (MBG Bulletin, Jan. 1951, p. 2). Meanwhile, in the original Garden, a section of the Townhouse had been opened as a public museum in 1929 and, in the North American Tract, in 1933, the dam had been replaced, the foot-bridge widened, and the road continued around the Olmsteds' lake (MBG Bulletin, Jan. 1934, p. 12).

During the late 1950s Noyes was replaced by Emmet Layton as staff landscape architect (MBG Bulletin, March, 1957, p. 35). In 1959 the Palm House was wrecked and Climatron by Mackey and Murphy with a geodesic dome was begun in its site (Layton, p. 34).

Layton, Layton, and Rohrbach submitted the first new master plan since the Olmsteds', in 1960. Their plan called for the re-establishment of the original north-south main axis usurped by the strong east-west link between the entrance gate and the Climatron. This was to be done by creating a new parking lot and main entrance from the north, and re-erecting the Linnaean House in the Southeast section of the Garden, thereby creating a concentration of historic structures in the South. A public restaurant and visitor information center and a restricted research facility were also suggested. (A photocopy of the Layton Master Plan map is included with this report.)

Since that time, no landscape architect per se has been on the staff. Minor changes have been left in the charge of the chief horticulturists--initially George H. Pring, then his successor Derek Burch, and now Robert Dingwall, designer of the northeast "Scented Garden for the Blind" done in 1972; and the present Curator of Hardy Plants, John Elsley; and Superintendent of Grounds, Walter Bryan Ward. Major developments such as the new southwest rose garden by Eugene Mackey III, and Harriet Rodes Bakewell, L. A., are effected by specialists called in for the specific project (Klein Interview).

The Environmental Planning and Design Master Plan done in 1972 with Geoffrey L. Rausch supervising, reiterates the Layton recommendation for re-establishing the north-south axis. The new suggestion is to make the public entrance through the Linnaean House at the north. This as yet has not been implemented. The recommended Shapleigh walk-through fountain, and Lehmann shelter and library to the west were completed in 1972-1974. In the summer of 1974, preparatory draining was commenced prior to the

implementation of the recommendation to turn the Olmsted's North American Tract into a Japanese Garden with an additional lake. (A copy of the map of the later master plan is included.)

Also in the summer of 1974, renovation of the Henry Shaw's Townhouse by Hellmuth, Obata, and Kassabaum was begun.

Detailed accounts on additions and alterations to certain Garden structures are included in separate HABS reports on the Henry Shaw Townhouse (MO-1135 A), the Administration Building (MO-1135 B), the Museum (MO-1135 C), the Linnaean House (MO-1135 D), the Henry Shaw Mausoleum (MO-1135 E), and the Cleveland Avenue Gatehouse (MO-1135 F).

B. Historical Events and Persons Associated with the Building:

1. Henry Shaw (1800-1889). Henry Shaw was born in Sheffield, England on July 24, 1800, the eldest son of a manufacturer of grates and fire-irons (Dimmock, p. 3). He was educated at nearby Thorne and at Mill Hill School, with its famed Linnaean cedar tree (Brockhoff, p. 3), until about 1817. He was already exhibiting his fondness for gardens and became advanced in the study of mathematics and Romance languages and literature (Dimmock, p. 4).

Shaw then entered into mercantile enterprises with his father and embarked with him for Canada in 1818 to continue a hardware trade. Leaving his family which eventually settled in Rochester, N. Y., Shaw soon moved quickly through Quebec, New York, and New Orleans to settle in St. Louis in March, 1819 (Brockhoff, p. 4). There he established a hardware trade, and expanded into fur and real estate (Shaw Mss., Bills-Real Estate, passim.).

Within twenty years of his immigration, Shaw's business acumen had allowed him to become one of the wealthiest and most powerful of St. Louis' entrepreneurs. Retiring from active business in 1839, he traveled to Europe in 1840-1842 and 1850-1851; and, inspired by gardens which he saw there, returned with the resolve to create a public botanical garden in St. Louis (Dimmock, p. 9). With advice from Sir William J. Hooker, director of the Royal Botanical Gardens at Kew, and from the renowned botanists Asa Gray and George Engelmann, Shaw and his architect worked for five years laying out the garden which opened in 1859 (Shaw, p. 138; Kobuski, pp. 100-110). In 1866 Shaw planned Tower Grove Park, the city's first driving park (MacAdam, p. 6). Shaw directed the Missouri Botanical Garden and supervised construction there until his death on August 25, 1889. Through his will he set up a governing Board of Trustees, endowed the Garden ("Some

Facts about the Garden," MBG Bulletin, Sept. 1943) and made possible the establishment of the Shaw School of Botany, affiliated with Washington University in 1885 (Shaw Mss., Trustees Minutes, 1889, passim.)

2. Asa Gray (1810-1888). The importance of building a museum-library-herbarium for the educational value and prestige of his botanical garden was impressed upon Shaw by Sir William J. Hooker (Kobuski, pp. 100-110) (1785-1860) the renowned botanist and Director of the Royal Botanical Gardens at Kew from 1841-1865 (Hooker, p. 729); and by Asa Gray, writer of the best-known botanical textbooks of the time, Fisher Professor of Natural History at Harvard University, and cataloguer of North American Flora ("Gray," Encyclopedia Britannica, pp. 668-669).

Born in Paris, Oneida County, New York, Nov. 18, 1810, Gray received his first scientific education under Dr. James Hadley and graduated from the Fairfield Medical School in 1831. His first publications - Elements of Botany (1836), Structural Botany and Manual of the Botany of the Northern United States (1848) - became standard texts for students of American botany. He concentrated his scientific efforts in the research and systemization of the botany of North America and is best noted for his work Synoptical Flora. In 1842 he was granted the Fischer Professorship of Natural History at Harvard University; he collected the largest herbarium in the country and the most valuable library. His support for Darwin and the theory of natural evolution assured the advancement and progress of botanical science, ("Gray," Encyclopedia Britannica, pp. 668-9).

It was Gray who first suggested a working relationship between Washington University and the Garden and who selected his own student William Trelease to succeed Henry Shaw as Director of the Missouri Botanical Garden. Dr. Gray is commemorated in the Missouri Botanical Garden where his bust sits on the front central pediment of the Linnaean House (MBG Bulletins, passim).

3. Dr. William Trelease (1857-1945). Dr. William Trelease, successor to Henry Shaw, became the director of the Missouri Botanical Garden and the first Engelmann Professor of Botany in the Henry Shaw School of Botany.

Trelease was born in Mt. Vernon, N. Y., February 22, 1857. He received degrees in Botanical Science from Cornell (1880) and then Harvard (1884) where he studied under Asa Gray. In 1885 he came to St. Louis from the Univ. of Wisconsin to supervise the newly founded Shaw School of Botany; he was then engaged by

Henry Shaw to succeed him as Director of the Missouri Botanical Garden; this opportunity was realized after Shaw's death in 1889 (Buchholz, pp. 192-193).

For 23 years (1889-1912) William Trelease labored to convert Shaw's private estate into one of the country's most outstanding scientific and educational institutions. He started the publication of the Missouri Botanical Garden annual reports, augmented the resources of the library, acquiring the Lewis E. Sturtevant Collection of Pre-Linnaean Works; invited great scientists to the Garden; published many scientific papers and works of his students at the Garden; engaged Frederick Law Olmsted to plan the North American Flora Tract; moved Henry Shaw's Townhouse (from 7th St. and Locust) to the Garden to become the Herbarium Building; and initiated plans for the Palm House and other additions to the physical plant. In 1912 his staff consisted of Dr. George T. Moore, Hermann Von Schrenck, Prof. Moses Craig, Henry C. Irish, James Gurney, and John Bannes. When he left, he had established for the Missouri Botanical Garden a reputation as one of the finest botanical gardens in the world and as a premier training ground for many prominent botanists (Pammel, passim).

4. Dr. George Engelmann (1809-1884). Dr. George Engelmann, author of "The Monography of North American Cuscutinae" in 1842, an internationally renowned botanical treatise; founder and first president of the St. Louis Academy of Science (Kelly, pp. 159-162), procured the advice of Hooker and Gray so influential upon Shaw's building of the Museum, purchased Dr. Bernhardt's herbarium in Erfurth, Germany, for the Museum, and did much research there when it was completed (Kobuski, pp. 100-110).
5. Dr. Hermann Von Schrenk (1873-1953). Dr. Hermann Von Schrenk, in charge of the Mississippi Valley Laboratory of the U. S. Department of Agriculture and the Division of the U. S. Forest Service and major contributor to the wood preserving industry (Cattell, p. 2588) was pathologist for the Garden from 1907 until his death and had his laboratory in the Museum basement.
6. Dr. Edgar Anderson (1897-1969). Dr. Edgar Anderson, third director of the Garden and contributor of the introgressive hybridization theory of ecological genetics (Gates, p. 1), had his offices in the Museum in the 1940s, '50s, and '60s.

C. Sources of Information:

1. Old views: Views of the Palm House of 1868, Pavilion of 1863, and Casino of 1873 and view from the west of the original Garden

entrance gate are in the Fuhrman glass plate collection at the Scottish Rite Library, 3633 Lendell, St. Louis. (See HABS photocopies.) Views of the main conservatories and 1868 Palm House, original parterre, and dozens of general Garden scenes from the late nineteenth century to the present are in the Garden Pictorial File in the Rare Book Stacks of Lehmann Library (some copied). A bird's-eye view of the Garden from the south was published in the St. Louis Illustrated, 1876. (See HABS photocopy.) Also copied for this report were an 1893 map, a 1904 map and guide, and a view of the North American Tract.

2. Bibliography:

a. Primary and unpublished sources:

1. Plans: The architect's plans for the 1915 Floral Display House; Olmsted Drawings from 1897-1905, #23-27, 29, 32, 35, 36, 47, 89, and 92; Noyes plans from 1914-1926, including the Linnaean pools, Economic Garden, and Gray's Summit Extension; and the Layton, Layton and Rohrbach Master Plan are in the John S. Lehmann Library in the Missouri Botanical Garden, 2315 Tower Grove Avenue, St. Louis. (The 1905 Olmsted Plan and Layton map have been copied for this report.) A plan by Environmental Planning and Design, Pittsburgh, Pa. (also copied) is in the custody of Assistant Garden Director William Klein, 2315 Tower Grove Avenue. Shaw's sketch for a garden c. 1850, a map of the Garden in 1858 and one in 1865 (copied), and a map of Shaw's lands in 1872, are on the walls of the northeast hall of Tower Grove House, 2315 Tower Grove Avenue, St. Louis, Missouri.
2. Manuscripts, etc.: An unpublished paper by Dorothy A. Brockhoff, entitled "A Study of Henry Shaw and His Houses," March 8, 1962; and the Shaw Manuscript collection which includes the Trustees' Minutes, Shaw's account-books for the Garden, bills and receipts, real estate accounts, and his "Guide to the Gardens in 1880" as well as the landscaping report prepared by the Olmsted firm are also in the Garden's Lehmann Library.
3. Deeds: Included in Shaw Manuscripts, "Real Estate, Barriere des Noyers," Lehmann Library.
4. Miscellaneous records: Marriage Records are at City Hall, Market St., St. Louis, Mo. State Census Reports are at the State Historical Library, Columbia, Mo.

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Prepared by Carolyn Hamm
Supplemented by Peter Dessauer
Historians
National Park Service
June through Sept.
1974 and 1975

PART II. PROJECT INFORMATION

The Tower Grove Park and Missouri Botanical Garden Project was jointly sponsored by the Historic American Buildings Survey of the National Park Service, the Board of Commissioners of Tower Grove Park, and the Board of Trustees of the Missouri Botanical Gardens.

Recorded under the direction of John Poppeliers, Chief of HABS, and Kenneth L. Anderson, HABS Principal Architect, the project was conducted during the summer of 1974 and 1975 at the Historic American Buildings Survey field office at the Missouri Botanical Garden, St. Louis.

1974 Team: Robert Harvey, Project Supervisor, (Landscape Architect); Steven Bauer, Project Foreman, (architect, University of Kansas); Carolyn Hamm, project historian, (Cornell University); Patrick Ackerman, student assistant architect, (Washington University); Suzanne Fauber, student assistant landscape architect, (University of Virginia); and Carol Macht, student assistant landscape architect, (University of Michigan).

1975 Team: Stuart Mertz, A.S.L.A., project supervisor, (landscape architect); Steven Bauer, project foreman, (Columbia University); Peter Dessauer, project historian, (Clemson University); Lennard A. Roberts, student assistant architect, (Cornell University); John R. Temmink, student assistant architect, (University of Virginia); and Theodore Torpy, landscape architect, (WASO).

The drawings were revised by HABS architect Paul Dolinsky, and the written data were edited by HABS Architectural Historian Denys Peter Myers, in the HABS Washington office in 1982. The photographs were taken by HABS/HAER Photographer Jet Lowe in 1983.

ADDENDUM TO
MISSOURI BOTANICAL GARDEN
(SHAW'S GARDEN)
2345 Tower Grove Avenue
Saint Louis City
Missouri

HABS No. MO-1135

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